ABSTRACT

An add-drop multiplexer is described, in one embodiment the add-drop multiplexer includes an optical transmission signal input port adapted to receive a wavelength division multiplexed optical transmission signal, an optical transmission signal output port adapted to output at least a portion of the wavelength division multiplexed optical transmission signal, an add-drop optical channel port adapted to receive an optical add channel and output an optical drop channel, and a wavelength selective optical filter arranged between the optical transmission signal input port, the optical transmission signal output port and the optical add-drop channel port. The wavelength selective optical filter reflects optical channels that will continue through the add-drop multiplexer along a transmission line to the optical transmission signal output port and permits an optical channel that is to be dropped to pass therethrough.